

**ABSTRACT OF THE DISCLOSURE**

The present invention discloses a method of forming a polycrystalline silicon layer, comprising: forming an amorphous silicon layer on a substrate; a first step of melting completely the amorphous silicon layer using a laser beam thereby forming the polycrystalline silicon layer by adopting a mask; and a second step of melting an upper portion the polycrystalline silicon layer using the laser beam by adopting the mask thereby recrystallizing the upper portion of the polycrystalline silicon layer. The defects of the upper portion of the polycrystalline silicon layer is prevented.